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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,766

02/19/2004

Junji Kondou

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EXAMINER

TIMORY, KABIR A

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

06/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/780,766

Applicant(s)

KONDOU ET AL.

Examiner

Kabir A. Timory

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment filed on March 29, 2007. Claims 1-9 are amended. Claims 1-9 are pending in this application and have been considered below.

Claim Objections

2. The objection to the claims 1-6 are corrected by the amendment, therefore, the objections are withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Brich et al. (US Patent Number 5,757,416).

Regarding claim 1:

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As shown in figure 2, Brich et al. discloses a frame generating method comprising:

- inserting a synchronous word into data at a position determined based on a noise cycle of a transmission line in order to generate a frame (transmission channel is interpreted to be transmission line) (column 37, lines 46-50); and
- transmitting the generated frame from a transmitter to a receiver via the transmission line (figure 1, 100, 150).

Regarding claim 2:

Brich et al. further discloses, wherein said position is arranged according to a predetermined arrangement algorithm (column 10, lines 4-8).

Regarding claim 3:

Brich et al. further discloses, wherein a parameter of the predetermined arrangement algorithm comprises at least one of a length of the synchronous word (rows of frames in interpreted to be the length of the frame. Please see figure 2C and column 10, lines 45-48) (column 32, lines 57-65) and an arrangement interval of the synchronous word (periodic basis is interpreted to be interval of synchronous word) (column 10, lines 24-29).

Regarding claim 5:

As shown in figure 2, Brich et al. discloses a frame generating method composing:

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- inserting a plurality of synchronous words into data at a position determined based on a noise cycle of a transmission line in order to generate a frame (transmission channel is interpreted to be transmission line) (column 37, lines 46-50); and
- transmitting the generated frame from a transmitter to a receiver via the transmission line (figure 1, 100, 150).

Regarding claim 6:

Brich et al. further discloses, wherein said inserting a plurality of synchronous words into data arranges the plurality of synchronous words over a section of frame as long as the noise cycle (inserting synchronization words in accordance with noise is interpreted to be synchronous words over a section of frame as long as the noise cycle) (column 37, lines 46-50).

Regarding claim 8:

Brich et al. further discloses, a frame generating method as recited in claim 5, wherein at least two of the plurality of synchronous words are arranged using the same pattern (column 10, lines 21-29).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brich et al. (US Patent Number 5,757,416).

Regarding claims 4, 7 and 9:

Brich et al. further discloses, wherein the length of the synchronous word is approximately equal to a multiple of a length of the noise cycle by a natural number (period of time is interpreted to be length of the noise cycle. Also, synchronization word in accordance with noise characteristic is interpreted to be synchronous word is approximately equal to a multiple of a length of the noise cycle by a natural number) (column 7, lines 65-67 and column 37, lines 46-50).

To reduce the existing of the noise in the system, it would have been obvious to one of ordinary skilled in the art to insert synchronous word with approximately equal the length of noise cycle in the synchronization frame as taught by Brich et al. in the system and method for transmitting a plurality of digital services. In doing so we can reduce the noise level in the system.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ling et al. (US Patent Number 5,329,547) discloses Method and apparatus for coherent communication in a spread-spectrum communication system, and Wu et al. (US Pub. Number 2002/0122381) discloses Channels estimation for

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multiple input - multiple output, orthogonal frequency division multiplexing (OFDM) system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kabir A. Timory whose telephone number is 571-270-1674. The examiner can normally be reached on 6:30 AM - 3:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kabir A. Timory
June 13, 2007


DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER